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NOTES ON THE EARLY STAGES OF DEILEPHILA INTERMEDIA.

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The eggs, laid June 17th, were small, oval, and green, turning dirty white before hatching.

Three caterpillars hatched in six days, two dying almost immediately. The remaining caterpillar was whitish, growing greener as it ate. It did not eat the shell, but attacked the leaves immediately. It had whitish lines between the segments, a fold of whitish skin behind the head, and a short whitish horn. The setae were invisible to the naked eye and the horn nearly so. It was about three sixteenths of an inch long. It spun threads of silk as it crawled. It ate evening primrose and wild grape, and ate small round holes in the leaves.

The first molt came in four days and the caterpillar was much more gaudy than before. The dorsum was blue-green with whitish green subdorsal lines. The sides were yellow-green with black spiracles. The venter was blue-green and the legs and props yellow-green. The head was small, round, bright green, and still had a fold of whitish skin behind it. In this molt the larva ate from the sides of the leaves.

The second molt came in nine days. The dorsum was blue-green, the sides were yellow-green granulated with white, and the venter was blue-green. There was a greenish white dorsal line and greenish white subdorsals which had on each segment a bright yellow dot. The stigmatal line was light green, but on the first two segments

it was yellow edged above with black. The dorsum of the eleventh segment was almost black running up to the short black horn. The spiracles were black with yellow centers, the last two being very large. There was a green spot on the stigmatal line under each spiracle. The head was green, small, and round. There was a whitish raised plate on the dorsum of the first segment.

The third molt followed in seven days. The head was leaf-green, with a black band above the mouth-parts. The dorsal plate was whitish green. The dorsum was dark velvety green with a light green dorsal line. On the eleventh segment the dorsum was black, and the whole dorsum shaded into black towards the subdorsals. The subdorsals were broken, being made up of small light green dots between the segments and large red spots on all the segments except the first two. There was a yellow spot on the second. The sides were lighter than the dorsum and covered with white dots. The spiracles were yellow with a black area around them. The stigmatal line was yellow and broken — disappearing between the segments. The venter was the same color as the sides, but the white spots were smaller and were only just above the legs and props. The legs were shiny black and the props were black with red plantae. The caudal horn was red at the base and black above. The anal plate was green with a brown tip and lighter edge. There was a light mark like a Greek phi [ϕ]. As the caterpillar grew larger the colors became paler and the subdorsal spots turned salmon pink.

The fourth molt came in five days and this time the caterpillar was greatly changed. The body was black and shiny. The head was slightly bilobed and pinkish brown, with a black line over the mouth-parts. The anal plate and props and dorsal plate were the same peculiar color as the head. There were large salmon pink spots edged below with white on every segment from three to eleven inclusive. The sides were dotted with yellow. The spiracles were large and white, turning pink the next day. The horn was bright-vermilion, granulated, and could be moved up and down. The legs were shiny black and the props were black with red plantae.

In this stage the whole caterpillar looked artificial as if made of wax. It had a peculiar habit of spinning a thread of silk as it brought its head up after eating a curve out of a leaf.

It fed for ten days, growing to the length of three inches. Then it stopped eating, grew shorter, the subdorsal spots turned purple and it crawled around very rapidly for a day. It then spun threads of silk to hold leaves together over it. Three days later (Aug. 1) it pupated, having had a larval life of thirty-eight days.

The pupa was about an inch and a quarter long and very slender. The head, and the antenna-, leg-, tongue-, and wing-cases, also the back of the thorax were